REMARKS

Applicants appreciate the Examiner's thorough consideration provided in the present application. Claims 1-26 are now present in the application. Claims 1, 3 and 12 have been amended. Claim 1 is independent. Reconsideration of this application, as amended, is respectfully requested.

Drawings

The Examiner did not indicate whether or not the formal drawings have been accepted. Since no objection has been received, Applicants assume that the drawings are acceptable and that no further action is necessary. Confirmation thereof in the next Office Action is respectfully requested.

Priority Under 35 U.S.C. §119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. §119, and receipt of the certified priority document.

Information Disclosure Citation

Applicants thank the Examiner for considering the references supplied with the Information Disclosure Statements filed on April 14, 2006, December 8, 2006 and January 31, 2008, and for providing Applicants with an initialed copy of the PTO-1449 forms filed therewith.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Claims 1-11, 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eberle, U.S. Patent No. 5,986,349 (hereinafter "Eberle") in view of Fredriksson et al., U.S. Patent No. 6,226,989 (hereinafter "Fredriksson"). Claims 12-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eberle modified by Fredriksson and further in view of Burton, U.S. Patent No. 6,931,662 (hereinafter "Burton"). Claims 19 and 22-24 stand rejected under 35

U.S.C. § 103(a) as being unpatentable over Eberle modified by Fredriksson and further in view of Zielfleisch, U.S. Patent No. 4,223,962 (hereinafter "Zielfleisch"). These rejections are respectfully traversed.

A complete discussion of the Examiner's rejections is set forth in the Office Action, and is not repeated herein.

Without conceding to the propriety of the Examiner's rejections, but merely to timely advance the prosecution of the application, as the Examiner will note, independent claim 1 has been amended to more clearly clarify the present invention.

In particular, independent claim 1 now recites a combination of elements including "a plurality of arms, each of which is rotationally supported at one end by a shaft, and wherein each arm carries a float at its other end, which is opposite to the supported end, so that a translational movement of the float caused by a wave results in rotation of the arm around the shaft, a power converter that converts power transmitted from the wave to the arms into electric power, the plurality of arms being arranged in a row such that a wave passing the row of arms causes the arms to successively pivot around the shaft, the arms being arranged at mutual distances, so that the passage of the wave causes the arms to pivot with a mutual phase shift, the power converter comprising a hydraulic driving system with a hydraulically driven motor, wherein each arm is connected to the hydraulic driving system by means of at least one hydraulic cylinder which causes a hydraulic medium of the hydraulic driving system to be displaced into the motor, the cylinders being arranged to displace the hydraulic medium to the motor via common hydraulic conduits, *wherein each cylinder is provided with a sensor for determining a position and/or rate of movement of the cylinder's piston, the sensor being arranged to transmit a signal to a control unit of the cylinders and associated valves,* ***the sensors being configured to monitor the power output of each individual cylinder,*** *so that* ***the transmission of power from each individual cylinder to the motor via the common hydraulic conduits of the hydraulic driving system is individually controllable in response to the signal*** *representing the individual cylinder's piston's position and/or rate of movement*; and ***wherein said control unit is configured to***

control the power output of each of the individual cylinders in such a manner that the power output of the apparatus is kept substantially even." Support for this amendment can be found at least at, for example, page 6, lines 14-17 and page 15, lines 7-10 of the Specification as originally filed. Thus, no new matter has been added. Applicants respectfully submit that the above-emphasized features set forth in claim 1 are not disclosed or suggested by the references relied on by the Examiner.

Specifically, with regard to the Examiner's reliance on Eberle, this reference teaches a wave enhancer for a system for producing electricity from ocean waves. As correctly acknowledged by the Examiner, Eberle does not disclose providing a sensor to each cylinder for determining a position and/or rate of movement of the cylinder's piston as set forth in the present invention. However, the Examiner turns to rely on Fredriksson asserting that Fredriksson teaches using position sensors 19E, 20E to provide a position signal to a control unit for controlling solenoid valves 19F, 20F of a piston/cylinder, which cures the deficiency of Eberle. Applicants respectfully disagree.

In particular, referring to col. 3, lines 15-27 and col. 3, lines 40-54 of Fredriksson, Fredriksson discloses:

> In accordance with the present invention this problem is solved by means of a restoring device which serves to apply an external force to the working piston to accelerate it towards the working cylinder as soon as the stroke of the working piston has exceeded a certain limit. In the embodiment shown in FIGS. 2 and 3, the fluid actuators 19C, 20C form parts of a hydraulic system S which incorporates the restoring device in addition to the energy absorbing device. *Operation of the restoring device is triggered by means of position sensors 19E, 20E, such as electromagnetic transmitters, which respond to the proximity of the associated piston 19D, 20D to operate two-position valves 19F, 20F.*
>
> If the stroke of the working piston 17 should become excessive so that ***the working piston is driven out of the working cylinder 16*** **and** ***the associated position sensor 19E or 20E responds***, *the associated two-position valve 19F or 20F will open a flow path for*

> *the hydraulic fluid between the associated auxiliary accumulator 26 or 27 and the fluid actuator 19C or 20C of the associated pump 19 or 20.* As a result, the working piston 17 will receive from the accumulator and the fluid actuator an impulse which is directed such that it tends to move the working piston 17 back into the working cylinder. When the working piston 17 is thus returned into the working cylinder 16, a return spring restores the valve 19F or 20F to its original or normal position. (Emphasis added).

It is understood that the position sensor 19E and 20E of Fredriksson are merely provided to respond to the movement of the working piston 17 out of the working cylinder 16, so that an energy accumulator is actuated and the working piston 17 will receive an impulse to move back into the working cylinder 16. Applicants respectfully submit that the position sensor 19E and 20E of Fredriksson cannot be equivalent to the sensors of the present invention because it is clear that the position sensor 19E and 20E of Fredriksson has nothing to do with monitoring the power output of each cylinder. By directed contrast, the sensors of the present invention are provided to each of the cylinders and are configured to **monitor the power output** of each individual cylinder, so that the transmission of power from each individual cylinder to the motor via the common hydraulic conduits of the hydraulic driving system is individually controllable in response to the signal representing the individual cylinder's piston's position and/or rate of movement. Applicants respectfully emphasize that it is an advantage that the overall power output of the apparatus can be kept substantially even, i.e. be maintained at a substantially constant level with no or only small fluctuations, because a current generated by the apparatus is thereby kept essentially constant, whereby it is achieved that AC current can be generated without the need for frequency converters. Furthermore, a maximum power output can be obtained.

Therefore, Applicants respectfully submit that Fredriksson fails to teach or suggest "***the sensors being configured to monitor the power output of each individual cylinder, so that the transmission of power from each individual cylinder to the motor via the common hydraulic conduits of the hydraulic driving system is individually controllable in response to the signal***

representing the individual cylinder's piston's position and/or rate of movement" as recited in claim 1, and thus fails to cure the deficiency of Eberle.

Further, Applicants respectfully submit that neither Eberle nor Fredriksson teaches or suggests "***said control unit is configured to control the power output of each of the individual cylinders in such a manner that the power output of the apparatus is kept substantially even***" as recited in claim 1.

In addition, Applicants respectfully submit that the Examiner's suggested modification of Eberle in view of Fredriksson is not appropriate. The Examiner is respectfully reminded that obviousness cannot be proven merely by showing that the elements of a claimed composition were known in the prior art; it must be shown that those of ordinary skill in the art would have had some "apparent reason to combine the known elements in the fashion claimed." *KSR Int'l Co. v. Teleflex Inc.* 127 S.Ct. 1727,1741 (2007). In this case, as mentioned above, the position sensors 19E and 20E of Fredriksson are provided to responds to the movement of the working piston 17 so as to prevent the working piston from being driven out of the working cylinder 16. However, a careful review of the inventions of Eberle and Fredriksson indicates that Eberle and Fredriksson respectfully have different converters including structurally and functionally different cylinders, and especially, Eberle has nothing to do with preventing the piston from being driven out of the working cylinder as mentioned in Fredriksson. Therefore, Applicants respectfully submit that there is no need for Eberle to include the position sensors of Fredriksson, and thus the Examiner has not established a *prima facie* basis to deny patentability of the claimed invention under 35 U.S.C. §103 for want of the requisite factual basis.

With regard to the Examiner's reliance on other secondary references, these references have only been relied on for their teachings against some dependent claims. It is submitted that these references also fail to disclose the above-mentioned features set forth in claim 1, and thus fail to cure the deficiency of Eberle and Fredriksson.

Since the references relied on by the Examiner, either taken alone or in combination, fail to teach each and every claimed feature as recited in claim 1, Applicants respectfully submit that claim 1 clearly defines over the teachings of the references relied on by the Examiner.

In addition, claims 2-26 depend, either directly or indirectly, from independent claim 1, and are therefore allowable based on their respective dependence from independent claim 1, which is believed to be allowable, as well as due to the additional novel features set forth therein.

For example, with regard to dependent claim 10, it is recited "the hydraulic driving system comprises *at least one* ***hydraulic accumulator*** *for intermittently storing energy in the hydraulic driving system*, and wherein the hydraulic driving system is ***controllable to release the energy stored in the accumulator***, when ***a float is passed by a wave trough, so as to force the float carried by the arm into the wave***." In the outstanding Office Action, the Examiner did not provide a clear explanation regarding which element of the references can be comparable with the ***hydraulic accumulator*** of the present invention where "the hydraulic driving system is ***controllable to release the energy stored in the accumulator***, when ***a float is passed by a wave trough, so as to force the float carried by the arm into the wave.***" In fact, Applicants respectfully submit that neither of the references relied on by the Examiner teaches this feature as recited in claim 10.

It is noted that in the present invention, the hydraulic driving system is ***controllable to release the energy stored in the accumulator***, when ***a float is passed by a wave trough, so as to force the float carried by the arm into the wave,*** so that the vertical distance traveled by the float is increased and the power output in a wave cycle is therefore increased. In other words, as a float moves from a submerged position in a wave near a wave crest to a position above water, potential energy is released. This energy can be accumulated in the accumulator or in a battery of accumulators, and accordingly, the potential energy released as the float moves out of the wave near the wave crest is not lost. The energy utilized to drive the float into the wave at the wave trough causes essentially no loss in the driving system, as the energy is provided by the release of the float at the wave crest. Clearly, these features and advantages are absent from the references

relied on by the Examiner. For this additional reason, Applicants respectfully submit that dependent claim 10 clearly defines over the references relied on by the Examiner.

With regard to dependent claims 25 and 26, it is recited "*a hydraulic lifting system for lifting the float out of the ocean and for locking the float in an upper position above the ocean surface*" and "the double-acting cylinder forms part of the hydraulic lifting system, so that *the cylinder is controllable to lift the float out of the ocean.*" It is noted that the present invention provides a *hydraulic lifting system for lifting the float out of the ocean and for locking the float in an upper position above the ocean surface* and *the cylinder is controllable to lift the float out of the ocean*, so that the float may be withdrawn from the ocean and kept in a locked position above the ocean surface at the occurrence of, e.g. a storm or prior to the occurrence of icing, so as to prevent extreme impacts occurring during storms and hurricanes from damaging the floats, arms and other parts of the wave power apparatuses. However, the Examiner did not provide detailed reasons with regard to the rejections of claims 25 and 26; and in fact, the references relied on by the Examiner nowhere teach or suggest the above mentioned features set forth in claims 25 and 26. For this additional reason, Applicants respectfully submit that dependent claims 25 and 26 clearly define over the references relied on by the Examiner.

In view of the above amendments to the claims and remarks, Applicants respectfully submit that claims 1-26 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

CONCLUSION

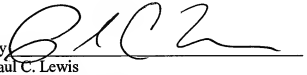
It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue. Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a one (1) month extension of time for filing a response in connection with the present application.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

Dated: **September 14, 2009**

Respectfully submitted,

By 

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